

## Sony Videocorder EV-320

Sony produced several VTRs in this one-inch format between 1963 and 1971. Models include the EV-200, EV-210, EV-300, EV-310, EV 320, EV-320F, EV-330TLV and UV-340. The 310 and 320 series were available with a remote control unit (EV 310R, EV 320R), or a Color Pack (EV 310C and EV 320C) or both (EV 310RC and 320 RC). Each machine was an improvement over the previous model. Starting with the EV-210, all the decks in the series were full color or color adaptable. The 320 series had a capstan servo. The EV-320F was a video editor with flying erase heads for superior edits. The EV-330TLV was a time lapse VTR capable of recording for up to 60 hours. The UV-340 was the last of the series and the only model that was a self-contained full color videocorder that did not require an external adapter to operate in color mode.

The videotape ranged in price in 1972 from \$40 for a 32 minute tape on a plastic reel, to \$70 for a 63 minute tape on a metal reel.

From the Product Literature



### SONY® VIDEOCORDER®

MODEL **EV-320**

The EV-320 represents the ultimate in color and monochrome video tape recording systems. Its special feature is capstan-servo electronic editing, which permits sequences from a variety of sources (tape, stills, live camera, etc.) to be inserted into a prerecorded tape with perfect synchronization. These inserted portions are practically indistinguishable from the original picture. In addition, using the EV-320's unique ADO feature, new scenes may be assembled into a tape without loss of sync.

The capstan servo synchronizes the EV-320 to the input signal in the playback mode. This feature allows the mixing of the EV-320's output signal with multiple cameras and with additional VTRs from a common sync source.

Another unique feature of the EV-320 is its ability to automatically synchronize to a 60 Hz power source when external sync is removed. Manual switching is not necessary for this operation. The EV-320 does not require a separate sync generator for playback.

In the insert mode, Audio Channel 2 is activated, so that the original sound on Channel 1 is not disturbed.

The EV-320 uses one-inch video tape and conforms to standard EIA-TV signal requirements. Any composite TV signal, including random interlaced, can be recorded and played back with high resolution and excellent quality.

Playing time is 60 minutes on a 2,460-foot reel of tape. Sony guarantees 100% tape interchangeability between all EV Series Videocorders. The EV-320's video heads are guaranteed for a full year.

#### FEATURES

- Capstan - servo electronic editing
- Pushbutton assembly and inserting
- No external sync generator required for playback
- Full NTSC color record/playback capability with Sony CLP-1B Color Adapter
- Slow motion and full stop action in color and monochrome
- Two audio channels, one simultaneous, one independent; picture can be inserted without affecting audio
- Simple operation, easy tape threading
- Guaranteed tape interchangeability with all other EV Series Videocorders
- Horizontal or vertical operation for complete versatility
- Rugged metal case with dust-steel cover
- Solid-state modular construction
- Rotary transformer instead of slip rings and brushes ensures high reliability and low video noise
- Remotely operated and remotely controllable
- Compatible with any existing CCTV system
- One-year head life warranty
- High resolution picture and excellent wide band sound quality; high signal-to-noise ratio for both audio and video
- Automatic end of tape shut-off
- Electronic and manual tracking control

#### APPLICATIONS

The EV-320 can be used in any application where high performance and professional reliability are required. Some typical examples are:

- Educational TV systems
- Industrial TV systems
- Government and military
- Scientific and medical
- Training
- Security
- Surveillance
- Sports and entertainment

EV 320 Price List 8/1/69 \$4,900.00  
SONY EV 320 1" reel to reel color video tape recorder

The EV-320 represents the ultimate in color and monochrome video tape recording systems. Its special feature is capstan-servo electronic editing, which permits sequences from a variety of sources (tape, off-air, live camera, etc.) to be inserted into a prerecorded tape with perfect synchronization. These inserted portions are practically indiscernible from the original picture. In addition, using the EV-320's unique ADD feature, new scenes may be assembled into a tape without loss of sync. The capstan-servo synchronizes the EV-320 to the input signal in the playback mode. This feature allows the mixing of the EV-320's output signal with multiple cameras and with additional VTRs from a common sync source. Another unique feature of the EV-320 is its ability to automatically synchronize to a 60 Hz power source when external sync is removed. Manual switching is not necessary for this operation. The EV-320 does not require a separate sync generator for playback. In the insert mode, Audio Channel 2 is activated, so that the original sound on Channel 1 is not disturbed. The EV-320 uses one-inch video tape and conforms to standard EIA TV signal requirements. Any composite TV signal, including random interlace, can be recorded and played back with high resolution and excellent quality. Playing time is 60 minutes on a 2,460-foot reel of tape. Sony guarantees 100% tape interchangeability between all EV Series Videocorders. The EV-320's video heads are guaranteed for a full year.



#### GENERAL

Power voltage 117V plus/minus 5V

Power frequency 60 Hz plus/minus 0.5 Hz

Power consumption 150 VA, max.

Ambient Temperature

23 degrees F-113 degrees F (storage)

41 degrees F-104 degrees F (operating)

Recording video signal

EIA standard, or 60 Hz field frequency, 2:1 or random interlaced, composite video signal, NTSC color signal

Video recording system Rotary 2-head scan system: frequency modulation; no bias saturation recording system

Tape interchangeability Can play back tapes recorded by all EV Series Videocorders

Modular construction Transistorized

Cabinet Housed in portable metal cabinet with dust cover and carrying handles

Number of heads

Video (record/playback) 2

Audio Channel 1 (record/playback) 1

Audio Channel 2 (record/playback) 1

Control Track (record/playback) 1

Erase (complete tape width or Audio Channel 2 track only) 1

Video head life One-year warranty

Operating position Vertical or horizontal

## VIDEO SIGNALS

Input Composite video signal (sync negative) 0.5V-2.0V p-p, 75 ohms unbalanced

Output Composite video signal (sync negative) 1.0V p-p, 75 ohms unbalanced

Horizontal resolution

Monochrome: more than 300 lines (RETMA Chart);

Color: more than 240 lines

Signal-to-noise ratio Better than 43 dB

## AUDIO SIGNALS

Input signal Low level (microphone: -70 dB, 600 ohms, balanced (0 dB=0.775V): High level (line): plus/minus 4 dB, 10K ohms balanced

Output signal Line out: +4 dB, 600 ohm load, balanced: monitor: +4 dB, 10 K ohm load, balanced

Frequency response 50 Hz +1 dB  $\pm$ 6dB: 100  $\pm$ 5KHz plus/minus 1 dB, 12 KHz +1  $\pm$ 6 dB

Signal to noise ratio Better than 50 dB at 3 % distortion level with NAB weighted curve

## TAPE TRANSPORT

Tape speed 7.8 ips plus/minus 0.2 %

Recording time 60 minutes with 2,460 ft. tape

Rewind/Fast Forward time Within 4 minutes with 2,460 ft. tape

Wow and flutter Within 0.15% wrms (NAB weighted)

Reel SONY reel Model RI-8V or R1-8VP

Tape SONY video tape Type V-11-A or equivalent

## SPECIAL FEATURES

Electronic Editing

Capstan servo system provides complete insert or adding of picture on prerecorded tape without any disturbance of synchronization. The playback signal synchronizes to standard vertical sync signal input. It synchronizes to power line automatically when there is no input signal, thus

making operation simple and easy. Audio Channel 2 is actuated in the insert mode, thus the original sound on Channel 1 is not disturbed

Slow and Still Playback speed is continuously variable from stop action to less than one-fifth of normal speed

Tracking Control Adjustable plus/minus 30% of rotary video head track

Audio 2 Dubbing Audio Channel 2 can be used to dub (record) audio information at a later time without erasing or disturbing the previously recorded picture

#### DIMENSIONS AND WEIGHT

Dimensions 18 3/4"(W) x 10 1/4"(H) x 19 1/4"(D)

Weight 86 lbs.

#### MONITOR

Video Monitor One of the two video outputs may be used

Audio Monitor Either Audio CH 1 or Audio CH 2 may be selected: 10K ohm balanced load